



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,643	01/20/2004	Scott Petersen	1001.1735101	5318
28075	7590	12/07/2006	EXAMINER	
CROMPTON, SEAGER & TUFTE, LLC 1221 NICOLLET AVENUE SUITE 800 MINNEAPOLIS, MN 55403-2420			SEVERSON, RYAN J	
			ART UNIT	PAPER NUMBER
			3731	

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/762,643

Applicant(s)

PETERSEN, SCOTT

Examiner

Ryan Severson

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 3, 7, 12, 13, 18, 22, 23 and 26-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 8-11, 14-17, 19-21, and 24-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/03/2004, 6/29/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Invention 1 (Claims 1-26), Species 1 (Figures 1, 2, and 9-13) and Subspecies 2 (Figures 5 and 6) in the reply filed on 16 November 2006 is acknowledged.
2. Applicant is informed that in the written restriction requirement composed 17 October 2006 there was a typographical error. Invention 1 leads to claims 1-26, and not 1-23 as previously stated. Applicant's election is still proper, however. This paragraph is to simply inform the applicant to avoid any future confusion.
3. Claims 3, 7, 12, 13, 18, 22, 23, and 26-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 16 November 2006.

### ***Specification***

4. The disclosure is objected to because of the following informalities: On page 23, line 16 of the specification, applicant states the bulbous tip and the apical head are both illustrated in the drawings by reference numeral 106. The bulbous tip should be reference numeral 152 as stated on page 22, line 13 of the specification.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ravenscroft et al. (6,007,558).** Ravenscroft et al. reference discloses the filter (10) substantially as claimed, including: an apical head (12) and filter legs, with each filter leg including a joined end section (at 12) and a free end section (opposite 12). Each filter leg also includes a support member (32) coupled to an anchoring member (28) to secure the filter to the inner wall of the vessel. The filter also contains a plurality of filter tubes (26) with an inner lumen that receives the support members (see Figures 4-6). The filter tubes are joined at one end by a hub (see Figure 8, Ref. Numeral 38).
6. Regarding claim 2, the filter tubes of Ravenscroft et al. reference are formed of tubes (see Column 6, Lines 9-12).
7. Regarding claim 5, the anchoring member is interpreted to include a bending region, as the anchoring members are capable of moving from a substantially straight position inside of filter tube (26) to a bent position to grasp the vessel wall (see Column 6, Lines 16-21).
8. Regarding claim 6, the hub (38) of Ravenscroft et al. reference is an annular ring (see Figure 8).

Art Unit: 3731

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) as applied to claim 1 above, and further in view of Whitcher et al. (6,273,901).** Ravenscroft et al. reference discloses the filter (10) substantially as claimed as has been applied to claim 1. However, Ravenscroft et al. reference does not disclose the filter further comprising a landing pad coupled to the free end of each filter tube. Attention is drawn to Whitcher et al. reference, which teaches a landing pad (see Figure 8, Ref. Numeral 42A) may be used at the free end of a filter to spread the force applied at the tips of the filter over a greater area, thereby reducing the pressure on the contact or grasping points. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the landing pads of Whitcher et al. reference to the filter tubes of Ravenscroft et al.

Art Unit: 3731

reference to allow the hook (28) of the support member to pass through to spread the force applied at the tips of the filter over a greater area, thereby reducing the pressure on the contact or grasping points.

10. **Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) as applied to claim 1 above, and further in view of Sabbaghian et al. (5,147,379).** Ravenscroft et al. reference discloses the filter (10) substantially as claimed as has been applied to claim 1. However, Ravenscroft et al. reference does not disclose a retrieval means for retrieving the filter using a jugular approach. Attention is drawn to Sabbaghian et al. reference, which teaches the expandable filter may be retrieved using a jugular approach (see Column 5, Lines 48-49) to maintain minimal invasiveness thereby reducing recovery time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a jugular retrieval means, as taught by Sabbaghian et al. reference, with the filter of Ravenscroft et al. reference, to maintain minimal invasiveness thereby reducing recovery time.

11. **Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) in view of Whitcher et al. (6,273,901).**

Ravenscroft et al. reference discloses the filter (10) substantially as claimed, including: an apical head (12) and filter legs, with each filter leg including a joined end section (at 12) and a free end section (opposite 12). Each filter leg also includes a support member (32) coupled to an anchoring member (28) to secure the filter to the inner wall of the vessel. The filter also contains a plurality of filter tubes (26) with an inner lumen

Art Unit: 3731

that receives the support members (see Figures 4-6). The filter tubes are joined at one end by a hub (see Figure 8, Ref. Numeral 38). However, Ravenscroft et al. reference does not disclose the filter further comprising a landing pad coupled to the free end of each filter tube. Attention is drawn to Whitcher et al. reference, which teaches a landing pad (see Figure 8, Ref. Numeral 42A) may be used at the free end of a filter to spread the force applied at the tips of the filter over a greater area, thereby reducing the pressure on the contact or grasping points. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the landing pads of Whitcher et al. reference to the filter tubes of Ravenscroft et al. reference to allow the hook (28) of the support member to pass through to spread the force applied at the tips of the filter over a greater area, thereby reducing the pressure on the contact or grasping points.

12. Regarding claim 11, the filter tubes of Ravenscroft et al. reference are formed of tubes (see Column 6, Lines 9-12).

13. **Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) in view of Whitcher et al. (6,273,901) as applied to claim 10 above, and further in view of Sabbaghian et al. (5,147,379).**

Ravenscroft et al. reference in view of Whitcher et al. reference discloses the filter (10) substantially as claimed as has been applied to claim 10. However, the combination of Ravenscroft et al. and Whitcher et al. references does not disclose a retrieval means for retrieving the filter using a jugular approach. Attention is drawn to Sabbaghian et al. reference, which teaches the expandable filter may be retrieved using a jugular

Art Unit: 3731

approach (see Column 5, Lines 48-49) to maintain minimal invasiveness thereby reducing recovery time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a jugular retrieval means, as taught by Sabbaghian et al. reference, with the filter of Ravenscroft et al. reference, to maintain minimal invasiveness thereby reducing recovery time.

**14. Claims 16, 17, 20, 21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) in view of Sabbaghian et al.**

**(5,147,379).** Ravenscroft et al. reference discloses the filter (10) substantially as claimed, including: an apical head (12) and filter legs, with each filter leg including a joined end section (at 12) and a free end section (opposite 12). Each filter leg also includes a support member (32) coupled to an anchoring member (28) to secure the filter to the inner wall of the vessel. The filter also contains a plurality of filter tubes (26) with an inner lumen that receives the support members (see Figures 4-6). The filter tubes are joined at one end by a hub (see Figure 8, Ref. Numeral 38). However, Ravenscroft et al. reference does not disclose a retrieval apparatus with an inner member to grasp the apical head, a middle tubular member to engage the hub, and an outer sheath for encapsulating the filter. Attention is drawn to Sabbaghian et al. reference, which teaches a retrieval device may have an inner member (5) to grasp the apical head, a middle tubular member (9) capable of engaging the hub, and an outer sheath (3) to encapsulate the filter to allow the filter to be retrieved or repositioned safely without causing damage to the interior of the vessel. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use



Art Unit: 3731

the retrieval device with inner member (5), middle tubular member (9), and outer sheath (3) of Sabbaghian et al. reference with the filter of Ravenscroft et al. reference to allow the filter to be retrieved or repositioned safely without causing damage to the interior of the vessel.

15. Regarding claim 16, the middle tubular member (9) is interpreted as being capable of engaging the hub. In Sabbaghian et al. reference, the middle tubular member is the assembly of tubular arms that clamp around the filter when they are compressed inside the outer sheath.

16. Regarding claim 17, the filter tubes of Ravenscroft et al. reference are formed of tubes (see Column 6, Lines 9-12).

17. Regarding claim 20, the anchoring member is interpreted to include a bending region, as the anchoring members are capable of moving from a substantially straight position inside of filter tube (26) to a bent position to grasp the vessel wall (see Column 6, Lines 16-21).

18. Regarding claim 21, the hub (38) of Ravenscroft et al. reference is an annular ring (see Figure 8).

19. Regarding claim 25, Sabbaghian et al. reference discloses the expandable filter may be retrieved using a jugular approach (see Column 5, Lines 48-49)

20. **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) in view of Sabbaghian et al. (5,147,379) as applied to claim 16 above, and further in view of Whitcher et al. (6,273,901).** Ravenscroft et al. reference in view of Sabbaghian et al. reference discloses the filter (10) and retrieval

Art Unit: 3731

assembly substantially as claimed as has been applied to claim 16. However, the combination of Ravenscroft et al. and Sabbaghian et al. references does not disclose the filter further comprising a landing pad coupled to the free end of each filter tube. Attention is drawn to Whitcher et al. reference, which teaches a landing pad (see Figure 8, Ref. Numeral 42A) may be used at the free end of a filter to spread the force applied at the tips of the filter over a greater area, thereby reducing the pressure on the contact or grasping points. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the landing pads of Whitcher et al. reference to the filter tubes of Ravenscroft et al. reference to allow the hook (28) of the support member to pass through to spread the force applied at the tips of the filter over a greater area, thereby reducing the pressure on the contact or grasping points.

**21. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (6,007,558) in view of Sabbaghian et al. (5,147,379) as applied to claim 16 above, and further in view of Hebert et al. (6,482,221).** Ravenscroft et al. reference in view of Sabbaghian et al. reference discloses the filter (10) and retrieval assembly substantially as claimed as has been applied to claim 16. However, the combination of Ravenscroft et al. and Sabbaghian et al. references does not disclose the inner member of the retrieval device of Sabbaghian et al. reference comprise a braided tubular member. Attention is drawn to Hebert et al. reference, which teaches a tubular member is made of a braided material (see Column 8, Lines 55-56) to provide varying flexibility to assist in navigation of tortuous lumens during implantation or removal of the device. Therefore, it would have been obvious to one of ordinary skill in

Art Unit: 3731

the art at the time the invention was made to make the inner member of the retrieval device of Sabbaghian et al. reference with a braided material, as taught by Hebert et al. reference, to provide varying flexibility to assist in navigation of tortuous lumens during implantation or removal of the device.

### ***Conclusion***

22. The prior art made of record and not relied upon and is considered pertinent to applicant's disclosure is as follows: 4,832,055 to Palestrant; 5,059,205 to El-Nounou et al.; 5,836,968 to Simon et al.; and 6,447,530 to Ostrovsky et al.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Severson whose telephone number is (571) 272-3142. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3731

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ryan Severson  
November 29, 2006



ANH TUAN T. NGUYEN  
SUPERVISORY PATENT EXAMINER

12/5/06